



# A research on burial rituals and skeleton remnants in Champapi Cemetery in Kafri Seimareh Strait

Lily Niakan✉

Central Zagros is considered to be one of the most important cultural realms in Iran's archaeological studies and different researchers have always found it interesting. Given its geographical location and environmental conditions, different elements have played their roles in shaping the culture of this realm. In the current study we study burial rituals and skeleton remnants in Champapi Cemetery in Kafri Seimareh strait. One of the most critical areas in Central Zagros is the large river of Samireh, located in impassable mountains, with big sources, fertile banks and permanent water. It has been a safe realm for groups of people over the past ten thousand years, so it has played an important role in the cultural interactions of the area. The findings from this area indicate that regarding social and economic factors Champapi has been a very complicated society in comparison with adjacent areas.

## INTRODUCTION

Central Zagros is a term used in prehistoric studies of Iran and by Canadian and Iranian researchers [1, 2]. Central Zagros contains states of Ilam, Lurestan, Kermanshah, Kurdistan and Hamedan politically [3]. Zagros was formed in the Laramideorogenous phase in the late Cretaceous period about 70 million years ago [4]. The main body of Zagros is formed as a result of the foldings during third period of geology whose waters pour into the Persian Gulf. The great Seimareh River is located in the folded Zagros that was formed during Miocene period when sedimentary layers formed at the end of the Triassic period were folded. This river which extends 417 km, with a gradient of 0.3%, flows from north to south through Zagros mountain range; from the Alvand Mountain in Hamedan and receiving branches from Malayer, Tuyserkan and Nahavand is called "Gamash". Then, in the south of Kermanshah, after receiving some sub-branches such as Mahidasht, Helyalan and Kerend, enters Ilam and Lorestan. Here, the folding of the Zarddalan Mountains directs it into a northeast-southwest direction, after a distance, it receives Caravel water and from there on it is called Seymareh. Then, it crosses a part of the boundary between two provinces and reaches the Strait of Zaban; later, as Shirvans water is reaches it, it is re-routed and continues along the direction of the north-west south-east and runs along the border of the two provinces. Here, other sub-branches such as Kolom, Roe and Seyab, which are all in the area of Seymareh dam, join in. In some parts, it cuts off the transverse sections the existing anticlines, which results in the formation of narrow straits such as the Chiasabz, Lalar, Kafri and Sazbun. Among these straits is Kafri strait, in which the remains of human skeletons have been found that refer to the Bronze Age, in the third and the second millennia BC. This cultural period coincides with the beginning of urbanization

and the evolution of cultures in this cultural realm; therefore, the above process can be evaluated according to biological or physical anthropology sciences, which are branches of bioarchaeology. This is possible using human and animal bones and other biological debris, through which it is possible to recognize the ancient ecosystems. Today, bioarchaeology includes branches that examine all human-related biological debris.

## MATERIALS AND METHODS

### Location and description of the excavation area

Champapi Cemetery, with the coordinates 38S0685699/UTM 3694764 and the altitudes ranging from 630 to 730 meters from the sea level, rests on a cliff that belongs to the third period of geology, with a steep slope and a height of 21 meters from the bed of the river Rue, which originates from the intersection of the two rivers of Caleb and Jaber. This ancient site is located in the western part of the Strait of Kafri and it is 3.5 km from the main road of Ilam to Badreh [5]. The surface findings revealed that it belongs to the middle bronze age. There were pottery scattered around and remains of old architecture in forms of stone walls appeared in the cemetery (Fig-1).

## RESULTS

### Champapicemetery

This cemetery contains remaining from two cemeteries that date back to the third to early first millennia BC. In various parts of the site we witnessed the damages made by cultural profiteers and looters who had excavated and taken its cultural materials. The oldest of these graves dates back to the early third millennium BC, made of stones and rocks, and was located in northern part of the cemetery. The graves of the second and the early first millennia were located in the middle part of the rocky mountain, and there were also some graves scattered high on the mountain. In the western part of the cemetery and on the lower

Member of the Scientific Committee of the Archeology Research Institute of Cultural Heritage and Tourism, Tehran, Iran;

✉Corresponding author: Lily Niakan, Member of the Scientific Committee of the Archeology Research Institute of Cultural Heritage and Tourism, Tehran, Iran. Email: havasian1991@gmail.com



**Figure 1** The location of the Kaferi strait in the middle of the catchment area of the Seymare Dam



**Figure 2** Explore part of the tomb of the Cham-Papi Cemetery



**Figure 3** A view of the Tomb of the Cham-papi Cemetery.

terrace of the mountain we saw graves with stone structures. Some of the data obtained from the burial grounds of this cemetery go as follows:

1. Form and shape of graves according to their structure and dimensions
2. Position of the graves in relation to their environment
3. Burial method and skeleton characteristics based on their age, gender, direction and position
4. Buried items including pottery, stone artifacts, stoneware, containers and metal objects

Studies have shown that this cemetery has tombs and individual graves that have been created at different levels on a rocky slope on the natural bed of the mountain. The slope is surfaced by means of stone walls and a mortar made from mud and sand in the eastern direction. Tombs and graves are created in forms squares, rectangles and ovals. There were no footprints and no entrances in the tombs and skeletons were laid on layers of sand used to smooth the surface. It seems that due to the leakage of rain water into these graves, their foundations were washed off and the remains of bones that had mostly turned into powder were stuck to the ground. The bodies were buried squatting, lying on the back, or sitting; and the sitting burial is probably a secondary burial. Squatting bodies were faced towards the sun. It is worth mentioning that the majority of the graves are aligned and with small distance separated by rows of rocks with a mortar of sand and mud. There were graves made of stone, rectangular or triangular in shape and domed. Some graves were covered with identical carved stones; on the other hand some did not have covers. The surface of these graves was covered by rows of stone. Due to rains and leakage of water most of the skeletons were destroyed, so burial position was not clear. In most graves, according to the tradition of offering food, there were products consisting of animal meat and plants such as wheat, lentil, oak seed and wild pistachio. There were burial gifts including pottery, stone objects and bronze tools. In the graves of the rich there were pottery dishes as well as bracelets, earrings, and brooches. And in the grave of men, there was warfare, such as arrow heads and daggers and in some graves spindles were laid by the grave. Also at the higher level of the cemetery, there was a tomb with the remains of a stone wall that was approximately 4\*3 meters in size. Under these tombs, in lower levels we found some other graves, in form of a rectangle with dimensions of 2 m in length and 70 cm in width in the eastern-wrester direction (Fig-2, 3).

#### Grave Number 14 Workshop B

Among the outstanding graves obtained in this area is the grave number 14 in workshop B, with a different architectural structure than the other tombs. The architectural structure of this tomb was oval and covered with white stones. After the removal of surface stones, we found sediments of soil on it; and after clearing the sediments we came across a skull, under a pottery, as well as a hair pin, earrings and a ring. Considering the size of the skull and the ring, we can conclude that the body was a female. Also, in lower level we identified another skull with scattered fragments of rotten bones. It seems that on the secondary burial, they were separated from each other by the accumulation of soft soil. Based on the objects placed there, including a daggers and combat gear, it was a male's grave. It was hard to determine the gender of a number of skeletons due to their corrosion; but in some graves, we concluded the gender based upon the objects we could find. We practiced different genetic tests to determine the age and gender of intact skeletons (Fig. 4-7).

#### Skeletal Remains in grave No. 6 Trench B

Grave 6, located on the northern part of the workshop on a steep rock, is in form of a rectangle, with dimensions of 70 cm in length and 60 cm in width with 107 in height on the level of 190 cm. The northern and eastern sides of it have regular stone walls with a mortar of mud. Its eastern wall is adjusted to grave No. 5. The study of supraorbital margin, prominence of glabella and mandible parameters such as union and flexion of ramus and sciatic notch showed that this person is probably a female. Also due to the condition of the epiphyses and teeth growth, it can be concluded that the woman was 15 to 17 years old. The height estimate was not possible due to erosion of the limbs. Pathological examination showed that there was a hole in the distal humerus (Fig. 8).

#### Peri Mortem Trauma and Changes

The cranium, the mandible, ribs and the vertebrae were fractured. From the left humerus, only the distal part, and from the right humerus the midshaft and the distal part were left. There were fractures in the midshaft of ulna and in the midshaft and proximal region of right radius. Of the right pelvis entire ilium and of the sacrum only the first vertebrae are left. Of the right femur only a part of the midshaft and distal are left.

#### The skeletal remains of Grave No. 24 Trench C

This square shaped grave was found in the eastern part of the workshop on a rocky slope in northern-southern direction with dimensions of 70 cm in length, 70 cm in width and 137 cm in height and a level of 158 cm. The burial method of this grave was squatting. In comparison with other graves, this grave is probably a secondary burial type. The bones, especially the skull and face, were completely broken, and the skeleton in facing south. Around the skeleton there was a bowl of clay and a metal pin. The walls are made with stones from the river and around the cliff, which are characterized by a two row layer and a layer with mud mortar (Fig. 9). The initial study of the remains of this grave in the anthropological lab showed that the MNI of this packet should be considered to be two people which may be called a comingled case.

#### Skeleton No. 24/1

This skeleton belongs to an adult who, based on the mastoid state, may probably be a female. According to the teeth, we can say that the skeleton belongs to a young woman aged 18-20 years. Next to the skull, there is a conical shaped pin with a narrow tip and a round bottom that is decorated by patterns of small circles. It was also not possible to estimate the height due to erosion of the limbs. A dental examination showed that most teeth and teeth sockets are present. Also, the surfaces of the teeth were all covered by minerals, which were more intense in primordial teeth.

#### Skeletal Remains No. 24/2

The next skeleton in this grave belongs to a child. Since teeth condition was not clear and the limbs were not fully grown it was not possible to estimate the age.

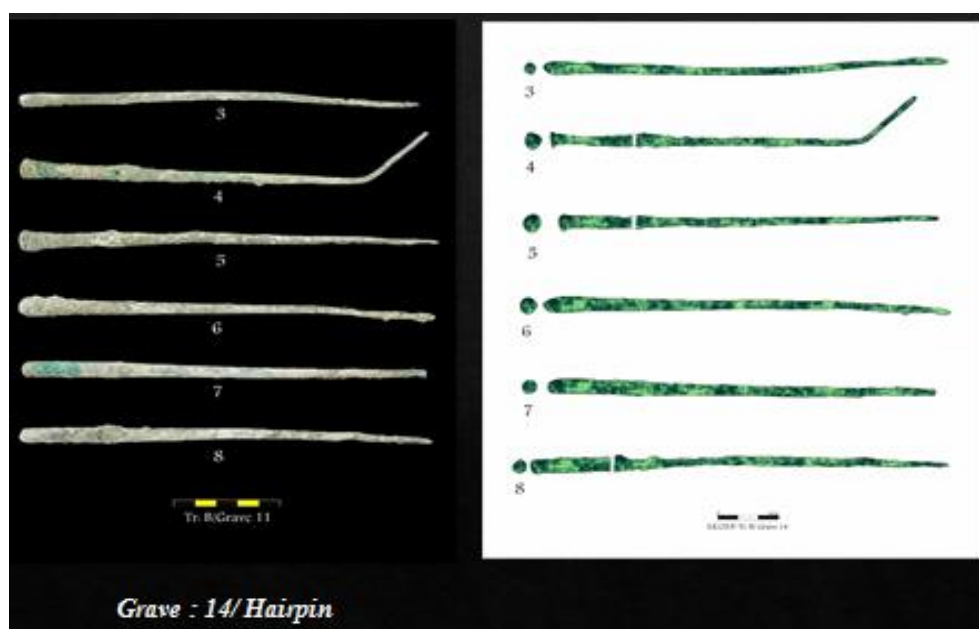
#### Grave No. 25

In the southeast part of the workshop there exists a rectangular stone on the cliff with a length of 130 cm and a width of 90 cm and in 290 cm level. The height of this grave is 35 centimeter. The structure of grave 1 is a large or medium size row of rocks. In some parts, there are two rows stones. Due to the rocky nature of the site and the great slope here, this grave has been terribly damaged. The orientation here is east-west direction, with the skull on the eastern side of the grave and legs in the





**Figure 4** A view of grave 14, workshop B



**Figure 5** A view of the Bronze Burner, grave 14



**Figure 6** A view of the Armband and Bronze Ring, grave 14



**Figure 7** Tripod clay pot, grave 14



**Figure 8** View of Distal humerus



**Figure 9** The skeletal remains of grave, 24

western part. This case has been buried in embryonic form and the remains of the bones, especially of the skull and face, are totally broken and unstable.

#### Grave No. 40

This rectangular grave in the western part of the cemetery emerged after the water level dropped. With the mess inside the grave it seems to be plundered by smugglers. Specifications and dimensions of this grave include: length 130 cm, width 68 cm and height 130 cm, at a level of 248 cm. Due to the rocky nature of the site the walls are made by rocks from the area and the river. The burial type in this grave was supine.

## DISCUSSION

The valley of Kafri strait is considered as another important area in the central Zagros along the Seymareh River. It separates the areas of south Mesopotamia and Zagros, and because of its proper environmental conditions, it has been home for people since prehistoric times [6]. Champapicemetery, with its burial rituals and excavated objects, shows the areas historical importance and we can call it a beginning for urbanization [7]. In the archaeological excavations of this cemetery in 2016, five skeletons were identified and examined. The burial methods in the Champapi are either squatting or lying or sitting methods, which date back from the late fourth millennium to the late 2nd millennium BC. Most of the graves and skeletons were not in good conditions; also, their skulls were damaged and healthy [8]. Therefore, the task of determining the gender and age of individuals, where the skeletons were almost intact, was performed using pelvic, skull and tooth indexes, and in cases where access to organ remains was not possible, only the teeth were examined, and grave number 6 was the most intact grave. Since many graves were messed, the criterion for identifying each person was teeth and bone remnants. In terms of age, according to the performed experiments, the two skeletons belonged to two young women aged between 18 and 20 and between 17 and 17 years old. Also, some small bones were identified that belonged to a child, which was buried in the secondary form. Sex and gender determination was done using teeth and the amount of tooth rubbing. Based on the ancient findings, Champapi, used to be a large settlement. The existence of this great cemetery during the Bronze Age and Iron Age, and the types of graves and cultural findings suggest that socially and economically speaking Champapi has been a more complicated society in comparison with the adjacent areas.

## CONCLUSION

The relative age of this area was determined using samples of pottery found in the cemetery and their similarity to the clay and pottery samples from the cemetery of BaniSormah and Kalleh-Nesar in Poshtkouh of Lorestan (Ilam Tape Guran, Tel Bermi, Godin Tappeh and Baba Jan Tape). Therefore, we estimate that they date back to the fourth millennium BC to the late second millennium BC.

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